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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,772	03/15/2004	Noboru Komine	Q80202	8627
23373	7590	05/02/2006		
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER WOLLSCHLAGER, JEFFREY MICHAEL				
ART UNIT		PAPER NUMBER		
1732				

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/799,772

Applicant(s)

KOMINE ET AL.

Examiner

Jeff Wollschlager

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/15/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moriguchi et al. (Japanese Patent Publication 2000-309637; published on July 11, 2000) in view of Darley (U.S. Patent 5,122,315; issued June 16, 1992).

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

It is noted that U.S. Patent 6,399,709, which claims priority from Japanese Patent Publication 2000-309637, has been employed as the translation for the priority document. As such, all citations regarding the Moriguchi et al. reference are drawn from U.S. Patent 6,399,709.

Regarding claim 1, Moriguchi et al. (herein Moriguchi) teach a process for producing a thermoplastic elastomer composition comprising the steps of feeding bulky rubber, a thermoplastic resin, and an additive, to an extruder and then melt kneading the mixture in the extruder (col. 7, lines 46-50; col. 11, lines 5-15).

Moriguchi further teaches utilizing supply apparatus such as a belt type feeder or screw type feeder as the quantitative feeders for the thermoplastic resin and the additives (col. 16, lines 5-12; col. 11, lines 5-16) and further teaches employing a volume displacement method to determine the mass of rubber being fed to the extruder (col. 8, lines 21-27; col. 16, lines 1-4).

Moriguchi does not teach measuring the amount of product produced at an outlet of the extruder and using that information to calculate the amount of rubber being fed to the extruder and controlling the feed amount of the rubber to the extruder based on the calculated amount. However, Darley analogously teaches a method and apparatus for monitoring and controlling the output of thermoplastic from an extruder (Abstract; col. 3, lines 15-36).

Therefore it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the claimed invention to modify the method of Moriguchi with the method and teaching of Darley to measure the amount of product produced at an outlet of the extruder and using that information in cooperation with the known feed rates of thermoplastic and additive as obtained in the method of Moriguchi to control the feed rate of rubber to the extruder because Darley teaches that extruders are widely recognized as being subject to deviations in the quality of product extruded (col. 1, lines

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40-52) and that a method to improve the quality of product being produced from an extruder is to measure and control the output from an extruder (col. 2, lines 36-47). Additionally, one of ordinary skill in the art at the time of the claimed invention would have recognize that the method of Darley eliminates the need for the labor intensive process of measuring the volume displacement of rubber prior to feeding it to an extruder as taught in the method of Moriguchi (col. 8; lines 21-27).

Further, it is noted that performing mass balances by calculating the last unknown variable in a process is notoriously well known in the art.

As to claim 2, Moriguchi teaches feeding the rubber to an extruder through a rubber feeder combined with a screw extruder and a gear pump (col. 9, lines 25-29).

As to claim 3, Darley analogously teaches using a controller to adjust the extruder feeding the gear pump to maintain a desired feeding pressure to a gear pump. (col. 3, lines 38-45). One of ordinary skill would be motivated to do this for the purpose of improving the quality of the product as taught by Darley (col. 1, lines 40-52; col. 2, lines 36-47).

As to claim 4, Moriguchi teaches the rubber is an ethylene-olefin copolymer rubber, or an ethylene-olefin-non-conjugated diene copolymer rubber (col. 4, lines 33-44; col. 5, lines 32-36).

As to claim 5, Moriguchi teaches the thermoplastic resin is an olefin polymer resin (col. 6, lines 61-67).

Conclusion

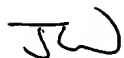
All claims are rejected.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeff Wollschlager
Examiner
Art Unit 1732

April 20, 2006



MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER